

IN THE CLAIMS

21. (PREVIOUSLY PRESENTED) A culturing method which provides for the maintenance of avian primordial germ cells (PGCs) for at least fourteen days in tissue culture comprising the followings steps:

(i) isolating primordial germ cells (PGCs) from a desired avian; and

(ii) culturing said PGCs for at least fourteen days in the absence of feeder cells in a culture medium comprising at least the following growth factors in amounts sufficient to maintain said PGCs for at least fourteen days in tissue culture in the absence of feeder cells:

- (2) leukemia inhibitory factor (LIF),
- (3) basic fibroblast growth factor (bFGF),
- (4) stem cell factor (SCF) and
- (5) insulin-like growth factor (IGF)

22. (PREVIOUSLY PRESENTED) The method of Claim 21, wherein the concentrations of said growth factors in the culture medium are at least the following minimal concentrations:

- (1) 0.00625 U/ μ l of LIF,
- (2) 0.25 pg/ μ l of bFGF,
- (3) 0.5625 pg/ μ l if IGF, and
- (4) 4.0 pg/ μ l of SCF.

23. (PREVIOUSLY PRESENTED) The method of claim 22, wherein the concentrations of said growth factors are in the range of from about two times to one hundred times said minimal concentrations.

24. (PREVIOUSLY PRESENTED) The method of claim 21, wherein said avian PGCs are obtained from the order *Gallinacea*.

25. The method of claim 24, wherein said PGCs are chicken or turkey PGCs.

26. (CANCELLED)

27. (PREVIOUSLY PRESENTED) The method according to claim 21, wherein some PGCs are maintained in culture for at least 25 days.

28. (PREVIOUSLY PRESENTED) The method according to claim 27, wherein said PGCs are maintained in culture for at least 4 months.

29. (PREVIOUSLY PRESENTED) The method of claim 21, which further comprises:

(iv) introducing into the resultant PGCs a nucleic acid that comprises a nucleotide sequence that encodes a polypeptide and is functionally linked to gene expression regulatory sequences that are operable in an avian cell.

30. (PREVIOUSLY PRESENTED) A culture comprising avian PGCs produced according to claim 21, said culture being free of feeder cells and comprising medium comprising LIF, bFGF, SCF, and IGF.

31. (PREVIOUSLY PRESENTED) The culture of claim 30 wherein said PGCs are chicken or turkey PGCs.

32. (PREVIOUSLY PRESENTED) A culture comprising avian PGCs produced according to claim 21, said culture being free of feeder cells and comprising medium comprising LIF, bFGF, SCF, and IGF, wherein a nucleic acid has been introduced into said PGCs that comprises a nucleotide sequence that encodes a polypeptide and is functionally linked to gene expression regulatory sequences that are operable in an avian cell.

33. (PREVIOUSLY PRESENTED) The method of claim 21, wherein said avian PGCs form a monolayer.

34. (PREVIOUSLY PRESENTED) The culture of claim 30, wherein said avian PGCs form a monolayer.

35. (PREVIOUSLY PRESENTED) The culture of claim 32, wherein said avian PGCs form a monolayer.